

# Recent IBM patents

---

*The following patents were recently issued by the countries in which the inventions were made.*

## Canada

|           |                               |                                                               |
|-----------|-------------------------------|---------------------------------------------------------------|
| 2,124,028 | D. K. Smith                   | Directional actuator for electronic media navigation          |
| 2,166,257 | M. H. Li and S. J. Limoges    | Call level interface to embedded static SQL                   |
| 2,212,354 | J. W. Benayon and G. W. Ewart | Method for HEAP management of fixed sized objects using pages |

## Germany

|              |                                                |                                                                                                           |
|--------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 715,251      | D. E. Staiger                                  | One cycle processor for real time processing                                                              |
| 19,723,862.9 | H. R. Bublitz, S. G. Lee, and A. R. Newth      | Mobile data carrier for security modules                                                                  |
| 69,517,705.2 | U. Bandara, S. Kunzmann, B. Lewis, and K. Mohr | Methods to squeeze the language model size under retention of recognition accuracy of a speech recognizer |

## Japan

|           |                                                                        |                                                                                                  |
|-----------|------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 3,072,707 | M. Ikezak, M. Kodate, and T. Koike                                     | Gate line design against ESD damage                                                              |
| 3,072,708 | T. Fukuda, Y. Morimoto, S. Morishita, and T. Tokuyama                  | Dual association rule between a 0-1 valued attribute and a numerical attribute and its efficient |
| 3,072,719 | Y. Kigami and T. Kuroda                                                | Controller for the data sector written with different frequency                                  |
| 3,072,721 | N. Nemoto and H. Takahashi                                             | Fast image processing                                                                            |
| 3,074,640 | Y. Kimura, H. Nakamura, K. Sueoka, and Y. Taira                        | Driving method for TFT LCD using optically compensated birefringence (OCB) display mode          |
| 3,074,649 | I. Shohji                                                              | Mechanical milling solder paste                                                                  |
| 3,075,505 | A. Fukushima, M. Kobayashi, and Y. Takeda                              | Selective local flicker free method for multimedia PC output on TV                               |
| 3,077,897 | T. R. Albrecht, V. Khanna, S. Kumar, M. Sri-Jayantha, and K. Takahashi | BT-directional lever latch                                                                       |
| 3,078,946 | H. Nijjima and T. Toyooka                                              | The cluster information sector for block-erase flash EEPROM                                      |
| 3,079,027 | Y. Naitoh                                                              | Two-step etching for ultra fine patterning                                                       |
| 3,079,079 | T. Asahata, H. Hatori, and E. Tazoe                                    | Transforming GUI to window activation                                                            |
| 3,080,362 | T. Chawanya, Y. Katoh, K. Satoh, and S. Tsuda                          | Structure of outer crash stop with high shock absorbability                                      |
| 3,080,363 | Y. Aoki, K. Ogasawara, F. Sai, H. Uchiike, S. Ueno, and I. Yoneda      | Valid AD range calibration method for actuator loading                                           |
| 3,080,364 | K. Arai, H. Asano, H. Ohzeki, K. Okada, and T. Ueda                    | Servo control method for high offset element                                                     |
| 3,083,742 | K. Musashi                                                             | New method for calculation of irregular spread sheet                                             |
| 3,083,748 | N. Iuchi, K. Kawai, T. Nishimura, and Y. Tahara                        | User defined character management by pre-combined font                                           |
| 3,083,779 | Y. Matsumura                                                           | Movable magnet actuator lock                                                                     |
| 3,083,805 | F. Ando, Y. Aoki, and A. Nakajima                                      | Web operation player and recorder                                                                |

|           |                                               |                                                                    |
|-----------|-----------------------------------------------|--------------------------------------------------------------------|
| 3,085,456 | K. Takahashi, D. W. Albrecht, and K. Serizawa | Double angle ramp                                                  |
| 3,085,631 | M. Okochi and T. Saito                        | A rule-based speech synthesis method using Fuzokugo sequence units |

#### Switzerland

|         |                                                                                          |                                                         |
|---------|------------------------------------------------------------------------------------------|---------------------------------------------------------|
| 748,542 | W. Hirt                                                                                  | Method and apparatus for optical wireless communication |
| 889,975 | F. Arrouy, G. Bednorz, H. Berke, E. Fritsch, J. R. Huber, J. P. Locquet, and E. Maechler | Deposition method and precursor therefor                |

#### United Kingdom

|           |                               |                                                    |
|-----------|-------------------------------|----------------------------------------------------|
| 697,780   | D. G. Martin and L. L. Porter | Voice response system                              |
| 2,316,264 | G. Boydell and D. J. Byford   | Billing for low-cost transactions via the Internet |

#### United States

|           |                                                                               |                                                                                                                               |
|-----------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 5,977,787 | C. Perry, D. McHerron, F. Taber, G. Das, M. LaForce, P. Gaschke, and S. Hegde | Large area multiple-chip probe assembly and method of making the same                                                         |
| 5,977,801 | D. W. Boerstler                                                               | Self-resetting phase/frequency detector with reduced dead zone                                                                |
| 5,977,813 | D. W. Boerstler                                                               | Temperature monitor/compensation circuit for integrated circuits                                                              |
| 5,977,837 | B. Schuelke, C. B. McBride, and J. W. Byrn                                    | Phase selector for external frequency divider and phase locked loop                                                           |
| 5,977,889 | N. H. Cohen                                                                   | Optimization of data representations for transmission or storage using differences from reference data                        |
| 5,977,890 | A. Floratos and I. Rigoutsos                                                  | Method and apparatus for data compression utilizing efficient pattern discovery                                               |
| 5,977,947 | B. Potu                                                                       | Method and apparatus for resizing block ordered video image frames with reduced on-chip cache                                 |
| 5,977,952 | L. D. Francis                                                                 | Method and system for an ambidextrous mouse                                                                                   |
| 5,977,969 | M. F. DiAngelo                                                                | Universal resource locator dialog with extended top level domains                                                             |
| 5,977,970 | H. Y. Amro and J. P. Dodson                                                   | Method and apparatus for moving information displayed in a window                                                             |
| 5,977,972 | C. Bates and P. R. Day                                                        | User interface component and method of navigating across boundary coupled to a scroll bar display element                     |
| 5,977,979 | J. D. Jones, S. J. Clough, and T. M. Wood                                     | Simulated three-dimensional display using bit-mapped information                                                              |
| 5,977,989 | D. J. Rumph and W. R. Lee                                                     | Method and apparatus for synchronizing video and graphics data in a multimedia display system including a shared frame buffer |
| 5,978,029 | A. Y. Ngai, B. A. Hall, C. E. Boice, J. M. Kaczmarczyk, and S. P. Pokrinchak  | Real-time encoding of video sequence employing two encoders and statistical analysis                                          |
| 5,978,163 | E. A. Cunningham                                                              | Circuit and method for optimizing bias supply in a magnetoresistive head based on temperature                                 |
| 5,978,183 | H. A. Santini, R. Hsiao, and T. Lin                                           | High resolution lead to shield short-resistant read head                                                                      |
| 5,978,215 | G. L. Chiu, L. S. Mok, and T. M. Cipolla                                      | Computer bottom keyboard incorporating arrangement for enhanced cooling                                                       |
| 5,978,217 | B. Kerrigan, J. W. Young, and L. T. Cooper                                    | Cooling air diffuser for computer enclosure                                                                                   |
| 5,978,223 | R. D. Hamilton and S. S. Kang                                                 | Dual heat sink assembly for cooling multiple electronic modules                                                               |
| 5,978,281 | D. L. Anand and R. Tamlyn                                                     | Method and apparatus for preventing postamble corruption within a memory system                                               |
| 5,978,291 | T. Kiriata                                                                    | Sub-block redundancy replacement for a giga-bit scale DRAM                                                                    |
| 5,978,335 | A. R. Clark, G. A. Jaquette, and R. A. Hutchins                               | Integrated calibration apparatus for a multi-mode information storage system                                                  |
| 5,978,384 | C. M. Kotchey                                                                 | Introducing inter-packet gaps in network transmissions                                                                        |
| 5,978,493 | E. R. Palmer and J. K. Kravitz                                                | Identification bracelet for child and guardian matching                                                                       |
| 5,978,501 | B. J. Grenon, D. S. O'Grady, J. G. Smolinski, and K. Badger                   | Adaptive inspection method and system                                                                                         |
| 5,978,580 | F. T. Sharp, I. A. Wang, J. Ng, and J. Sidik                                  | Passing arrays to stored procedures                                                                                           |
| 5,978,583 | J. Moreira, K. Ekanadham, and V. K. Naik                                      | Method for resource control in parallel environments using program organization and run-time support                          |
| 5,978,751 | D. D. Pence and J. F. Raley                                                   | Variegated manufacturing process test method and apparatus                                                                    |
| 5,978,785 | D. D. Koski, T. A. Shore, and V. M. Johnson                                   | Object oriented case-based reasoning framework mechanism                                                                      |
| 5,978,788 | A. Jhingran, C. S. Li, J. T. Robinson, and V. Castelli                        | System and method for generating multi-representations of a data cube                                                         |

|           |                                                                                                                                            |                                                                                                                                                                |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5,978,792 | B. Iyer, F. L. Lin, G. Bhargava, H. S. Tie, J. Mukai, P. Goel, P. Hoa, P. S. Desai, and W. S. Perlman                                      | Method and apparatus for generating dynamic and hybrid sparse indices for workfiles used in SQL queries                                                        |
| 5,978,794 | K. Shim, R. Agrawal, and R. Srikant                                                                                                        | Method and system for performing spatial similarity joins on high-dimensional points                                                                           |
| 5,978,796 | C. Tomlyn, G. Robinson, and W. E. Malloy                                                                                                   | Mapping dense data blocks to rows in a relational database                                                                                                     |
| 5,978,813 | J. V. Meegan, R. C. Foltz, S. A. Wadood, and S. L. Lin                                                                                     | System for providing synchronization between a local area network and a distributing computer environment                                                      |
| 5,978,819 | V. Berstis                                                                                                                                 | Automatically converting preformatted text into reflowable text for TV viewing                                                                                 |
| 5,978,832 | M. J. Sirkin                                                                                                                               | Time to completion determination in a multitasking workstation                                                                                                 |
| 5,978,848 | G. F. McBrearty, J. J. Maddalozzo, and J. M. Shieh                                                                                         | Web browser method and system for backgrounding a link access during slow link access time periods                                                             |
| 5,978,849 | S. Khanna                                                                                                                                  | Systems, methods, and computer program products for establishing TCP connections using information from closed TCP connections in time-wait state              |
| 5,978,867 | D. E. Carmon, F. E. Grieco, and L. B. Marshall                                                                                             | System for counting clock cycles stolen from a data processor and providing the count value to a second processor accessing the data processor cycle resources |
| 5,978,869 | D. Neal, G. L. Guthrie, R. A. Kelley, and S. M. Thurber                                                                                    | Enhanced dual speed bus computer system                                                                                                                        |
| 5,978,871 | D. E. Williams, J. D. Lewis, J. S. Dodson, and R. K. Arimilli                                                                              | Method of layer cache and architectural specific functions for splitting operations                                                                            |
| 5,978,896 | A. D. Ogden, C. C. Kau, D. S. Levitan, and J. A. Kahle                                                                                     | Method and system for increased instruction dispatch efficiency in a superscalar processor system                                                              |
| 5,978,916 | G. W. Randall                                                                                                                              | Method, system and computer program product for updating region-dependent software using a common update module for multiple regions                           |
| 5,978,929 | H. Pilo and J. J. Covino                                                                                                                   | Computer unit responsive to difference between external clock period and circuit characteristic period                                                         |
| 5,978,931 | G. Daniel, J. M. Dortu, K. P. Pfefferl, and T. Kirihata                                                                                    | Variable domain redundancy replacement configuration for a memory device                                                                                       |
| 5,978,936 | A. Chandra, D. C. Bossen, and N. Tendolkar                                                                                                 | Run time error probe in a network computing environment                                                                                                        |
| 5,978,938 | J. M. Kaiser and W. E. Maule                                                                                                               | Fault isolation feature for an I/O or system bus                                                                                                               |
| 5,979,814 | E. R. Childers                                                                                                                             | Invertible portable container having two separate lengths of recording tape                                                                                    |
| 5,980,275 | C. H. Shempert, D. P. Beaman, and Y. H. Ng                                                                                                 | Electronic circuit board interface mounting bracket                                                                                                            |
| 5,980,281 | C. N. Ramirez, D. Neal, J. R. Taylor, and W. D. Scott                                                                                      | Mechanism to assist in insertion or removal of PCI cards                                                                                                       |
| 5,980,324 | D. P. Gaio, J. Berg, and W. K. Hogan                                                                                                       | Guide rail system with integrated wedge connector for removable transceiver                                                                                    |
| 5,980,647 | E. D. Buker, E. W. Conrad, and J. M. Leas                                                                                                  | Metal removal cleaning process and apparatus                                                                                                                   |
| 5,981,000 | A. Grill, C. Jahnes, and V. V. Patel                                                                                                       | Method for fabricating a thermally stable diamond-like carbon film                                                                                             |
| 5,981,110 | M. George and T. E. Neary                                                                                                                  | Method for repairing photomasks                                                                                                                                |
| 5,981,148 | C. Huynh, J. Dunn, J. S. Brown, P. W. Pastel, R. K. Leidy, and S. J. Holmes                                                                | Method for forming sidewall spacers using frequency doubling hybrid resist and device formed thereby                                                           |
| 5,981,310 | D. Goland, D. J. Womac, D. L. Edwards, G. DiGiacomo, L. D. Gross, L. W. Herron, R. A. Sherif, S. Iruvanti, S. L. Shinde, and S. S. Drofitz | Multi-chip heat-sink cap assembly                                                                                                                              |
| 5,981,312 | D. S. Farquhar, J. R. Wilcox, K. I. Papatthomas, and M. J. Klodowski                                                                       | Method for injection molded flip chip encapsulation                                                                                                            |
| 5,981,332 | J. Alsmeyer, J. A. Mandelman, L. L. Hsu, and W. R. Tonti                                                                                   | Reduced parasitic leakage in semiconductor devices                                                                                                             |
| 5,981,374 | D. B. Nguyen, H. M. Dalal, and H. S. Rathore                                                                                               | Sub-half-micron multi-level interconnection structure and process thereof                                                                                      |
| 5,981,880 | A. C. Bhatt, B. K. Appelt, J. M. Lauffer, J. W. Fuller, Jr., V. R. Markovich, W. E. Wilson, and W. J. Rudik                                | Electronic device packages having glass free non-conductive layers                                                                                             |
| 5,981,903 | A. Tam, C. C. Poon, I. K. Pour, J. H. Brannon, and P. Baumgart                                                                             | Laser system for simultaneous texturing of two sides of a substrate                                                                                            |
| 5,981,962 | R. A. Kendall and T. R. Groves                                                                                                             | Distributed direct write lithography system using multiple variable shaped electron beams                                                                      |
| 5,981,970 | B. K. Furman, C. D. Dimitrakopoulos, D. Neumayer, P. R. Duncombe, R. B. Laibowitz, and S. Purushothaman                                    | Thin-film field-effect transistor with organic semiconductor requiring low operating voltages                                                                  |
| 5,981,992 | D. Kenney                                                                                                                                  | Mechanical supports for very thin capacitor plates                                                                                                             |

|           |                                                                                                                     |                                                                                                                                                                                                  |
|-----------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5,982,038 | D. L. Edwards, H. T. Toy, J. Covell, L. R. Bolde, L. S. Goldmann, and P. A. Gruber                                  | Cast metal seal for semiconductor substrates                                                                                                                                                     |
| 5,982,189 | F. Motika, J. Shushereba, and P. Nigh                                                                               | Built-in dynamic stress for integrated circuits                                                                                                                                                  |
| 5,982,203 | A. R. Pelella                                                                                                       | Two stage SRCMOS sense amplifier                                                                                                                                                                 |
| 5,982,225 | E. J. Nowak, M. Sayala, R. A. Warren, S. Mittl, T. B. Hook, and T. E. Forhan                                        | Hot electron compensation for improved MOS transistor reliability                                                                                                                                |
| 5,982,232 | D. L. Rogers                                                                                                        | Low noise, bandwidth compensated transimpedance amplifier                                                                                                                                        |
| 5,982,367 | C. C. Alimpich, D. Neuhard, J. S. Goddard, M. T. Vo, and R. Yang                                                    | Method and system for creating a list from pre-defined and use-defined printer values                                                                                                            |
| 5,982,370 | R. J. Kamper                                                                                                        | Highlighting tool for search specification in a user interface of a computer system                                                                                                              |
| 5,982,372 | A. P. Brush, D. Lection, D. R. Wood, G. A. Cuomo, and S. D. Redpath                                                 | Visual metaphor for shortcut navigation in a virtual world                                                                                                                                       |
| 5,982,627 | J. Adams, J. Walker, P. Haughton, R. Samper, and T. S. Farrow                                                       | Card retention latch including card guide and locking frame                                                                                                                                      |
| 5,982,692 | B. Ross, G. A. Yeung, and G. M. Lattimore                                                                           | Bit line boost amplifier                                                                                                                                                                         |
| 5,982,865 | J. Michaels, P. Jaiswal, P. P. Mansey, S. Gandhi, and T. Creamer                                                    | Flexible customer billing solution for telephone systems utilizing intelligent peripherals in advanced intelligent network                                                                       |
| 5,982,997 | D. E. Stone, D. J. Shields, and R. H. Hohensee                                                                      | Data stream protocol for immediate job switching                                                                                                                                                 |
| 5,983,003 | D. Lection, D. A. Schell, D. R. Wood, and S. D. Redpath                                                             | Interactive station indicator and user qualifier for virtual worlds                                                                                                                              |
| 5,983,016 | D. Gangopadhyay, G. C. Doney, M. M. Golding, R. Panwar, S. Brodsky, and S. Mitra                                    | Execution engine in an object modeling tool                                                                                                                                                      |
| 5,983,020 | F. Tip and P. F. Sweeney                                                                                            | Rule-based engine for class hierarchy transformation of class hierarchy of an object-oriented program                                                                                            |
| 5,983,025 | C. M. Herring, J. E. Derrick, and W. R. Greer                                                                       | Computer system buffers for providing concurrency and avoid deadlock conditions between CPU accesses, local bus accesses, and memory accesses                                                    |
| 5,983,235 | J. L. Howe III and K. R. Blackman                                                                                   | A method for managing queryable datastore persistent objects and queryable datastore collections in an object-oriented environment                                                               |
| 5,983,239 | D. M. Cannon                                                                                                        | Storage management system with file aggregation supporting multiple aggregated file counterparts                                                                                                 |
| 5,983,243 | A. F. Stuart, M. Viswanathan, and R. L. Heiney                                                                      | Data processing system and method for preparing a presentation-ready document that produces separate images of fixed and variable data and a bookticket specifying an arrangement of such images |
| 5,983,244 | W. G. Nation                                                                                                        | Indicating when clickable image link on a hypertext image map of a computer web browser has been traversed                                                                                       |
| 5,983,259 | A. J. Stagg, B. Rajaraman, D. Gugliotta, L. D. Long, L. F. Menditto, L. H. Overby, M. E. Miyake, and S. A. Campbell | Systems and methods for transmitting and receiving data in connection with a communications stack in a communications system                                                                     |
| 5,983,281 | B. Vashaw, C. Norton, D. Ogle, and K. M. Tracey                                                                     | Load balancing in a multiple network environment                                                                                                                                                 |
| 5,983,318 | D. J. Winarski and L. D. Willson                                                                                    | Maximizing hit ratio in an automated storage library                                                                                                                                             |
| 5,983,322 | J. D. Lewis, J. S. Dodson, L. Clark, and R. K. Arimilli                                                             | Hardware-managed programmable congruence class caching mechanism                                                                                                                                 |
| 5,983,335 | H. Dwyer                                                                                                            | Computer system having organization for multiple condition code setting and for testing instruction out-of-order                                                                                 |
| 5,983,339 | P. J. Klim                                                                                                          | Power-down system and method for pipelined logic functions                                                                                                                                       |
| 5,983,341 | H. Cheong, H. Q. Le, and P. J. Jordan                                                                               | Data processing system and method for anticipating instruction execution                                                                                                                         |
| 5,983,343 | J. E. Phillips and S. E. Eisen                                                                                      | Data processing system having an apparatus for de-serialized status register operation and method therefor                                                                                       |
| 5,983,368 | D. Noddings                                                                                                         | Method and system for facilitating hierarchical storage management (HSM) testing                                                                                                                 |
| 5,983,380 | F. Motika, J. Shushereba, and S. V. Pateras                                                                         | Weighted random pattern built-in self-test                                                                                                                                                       |
| 5,984,478 | F. E. Doany and J. Misewich                                                                                         | Dynamic optical compensation for color sequential projection display                                                                                                                             |
| 5,984,523 | D. E. Houser and F. S. Poch                                                                                         | Method for recording the heat generated in a hole wall of a substrate during a drilling operation                                                                                                |
| 5,984,608 | D. C. Linnell, R. Kuder, R. A. Meyen, R. P. Westerfield, and T. Jantz                                               | Automated chamfering apparatus and method                                                                                                                                                        |
| 5,984,691 | G. E. Myrto, G. L. Kehley, J. H. Sherman, and W. L. Brodsky                                                         | Flexible circuitized interposer with apertured member and method for making same                                                                                                                 |
| 5,984,787 | R. J. Redpath                                                                                                       | Method and system for multi-user game recovery                                                                                                                                                   |
| 5,985,104 | J. D. Westwood                                                                                                      | Sputtered mask defined with highly selective side wall chemical etching                                                                                                                          |

|           |                                                                                                                                                                                      |                                                                                                                                                                 |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5,985,128 | G. B. Monjeau, H. Liu, K. Ruffing, K. P. McLaughlin, S. Farooq, and S. Kaja                                                                                                          | Method of performing processes on features with electricity                                                                                                     |
| 5,985,458 | A. Viehbeck, J. M. Rubino, J. M. Shaw, M. Angelopoulos, R. Saraf, S. Purushothaman, T. Graham, and V. A. Brusic                                                                      | A housing for electromagnetic interference shielding thereof                                                                                                    |
| 5,985,492 | D. C. Wheeler, J. A. Mandelman, and R. Mih                                                                                                                                           | Multi-phase mask                                                                                                                                                |
| 5,985,524 | D. C. Hofer, G. M. Wallraff, R. Sooriyakumaran, and R. D. Allen                                                                                                                      | Process for using bilayer photoresist                                                                                                                           |
| 5,985,760 | D. H. Glatzel, D. J. Russell, and J. M. Lauffer                                                                                                                                      | Method for manufacturing a high density electronic circuit assembly                                                                                             |
| 5,985,762 | R. M. Geffken and S. E. Luce                                                                                                                                                         | Method of forming a self-aligned copper diffusion barrier in vias                                                                                               |
| 5,986,395 | A. R. Knox, J. U. Knickerbocker, and R. Rosenberg                                                                                                                                    | Metal/ferrite laminate magnet                                                                                                                                   |
| 5,986,426 | B. S. Rowan                                                                                                                                                                          | Adaptive pulse width modulated motor control                                                                                                                    |
| 5,986,472 | F. F. Hinedi, M. Cases, R. Dennard, and S. Dutta                                                                                                                                     | Voltage level translation for an output driver system with a bias generator                                                                                     |
| 5,986,511 | G. R. Castellucci                                                                                                                                                                    | Frequency dependent impedance                                                                                                                                   |
| 5,986,652 | J. P. Bigus and R. E. Medl                                                                                                                                                           | Method for editing object wherein steps for creating that object are preserved                                                                                  |
| 5,986,676 | D. Dwin, D. W. Nuechterlein, P. Yosim, and W. R. Lee                                                                                                                                 | Device for protecting selected information in multi-media workstations                                                                                          |
| 5,986,714 | C. F. Marino                                                                                                                                                                         | Method and apparatus for selectively reducing bandwidth of real-time video data                                                                                 |
| 5,986,759 | D. M. DeCain, K. R. Pope, and P. C. Hobbs                                                                                                                                            | Optical interferometer measurement apparatus and method                                                                                                         |
| 5,986,761 | A. Juliana, H. J. Rosen, L. Crawforth, M. R. Latta, and W. I. Imaino                                                                                                                 | Laser-based inspection tool for disk defects and curvature                                                                                                      |
| 5,986,852 | D. J. Wanek, D. L. Good, J. C. Jans, J. L. Neubauer, J. R. Reidenbach, J. T. Coffey, K. W. Meyer, L. Berg, P. M. Herman, R. Greenberg, S. H. Voss, W. E. Zahn, and W. W. Brooks, Jr. | High capacity, high performance low profile disk drive                                                                                                          |
| 5,986,853 | R. G. Simmons and W. C. Shum                                                                                                                                                         | Transducer suspension system                                                                                                                                    |
| 5,986,950 | T. W. Joseph                                                                                                                                                                         | Use of redundant circuits to improve the reliability of an integrated circuit                                                                                   |
| 5,986,962 | C. L. Bertin, K. J. Goodnow, S. T. Ventrone, and W. D. Pricer                                                                                                                        | Internal shadow latch                                                                                                                                           |
| 5,987,124 | D. B. Johnson and S. M. Matyas                                                                                                                                                       | Method and apparatus for encrypting long blocks using a short-block encryption procedure                                                                        |
| 5,987,247 | C. Lau                                                                                                                                                                               | Systems, methods and computer program products for building frameworks in an object oriented environment                                                        |
| 5,987,255 | N. Sundaresan                                                                                                                                                                        | A method of, system for, and article of manufacture for providing a generic adaptor for converting from a sequential iterator to a pre-thread parallel iterator |
| 5,987,404 | J. Koppelman, M. Franz, M. E. Epstein, R. T. Ward, S. Della Pietra, and S. Roukos                                                                                                    | Statistical natural language understanding using hidden clumpings                                                                                               |
| 5,987,405 | D. F. Bantz and R. Zavrel                                                                                                                                                            | Speech compression by speech recognition                                                                                                                        |
| 5,987,423 | A. Berg, A. Nilsson, H. Odegaard, K. A. Bohrer, T. Brane, T. Dahl, T. Michaelson, T. Pernbeck, and V. D. Arnold                                                                      | Object oriented technology framework for order processing                                                                                                       |
| 5,987,455 | R. J. Cochrane, R. S. Sidle, and S. P. Rielau                                                                                                                                        | Intelligent compilation of procedural functions for query processing systems                                                                                    |
| 5,987,465 | E. T. Lin, J. Kleewein, and Y. Wang                                                                                                                                                  | System, method and computer program product for positioned update support                                                                                       |
| 5,987,466 | T. D. Greer and W. F. Phillips                                                                                                                                                       | Presenting web pages with discrete, browser-controlled complexity levels                                                                                        |
| 5,987,477 | A. Zlotek, B. Shmueli, and F. Schmuck                                                                                                                                                | Parallel file system and method for parallel write sharing                                                                                                      |
| 5,987,482 | C. Bates and P. R. Day                                                                                                                                                               | Computer system and method of displaying hypertext documents with internal hypertext link definitions                                                           |
| 5,987,495 | C. A. Scalzi, D. F. Ault, and K. E. Plambeck                                                                                                                                         | Method and apparatus for fully restoring a program context following an interrupt                                                                               |
| 5,987,515 | B. H. Ratcliff and S. R. Valley                                                                                                                                                      | Internet protocol assists using multi-path channel protocol                                                                                                     |
| 5,987,521 | A. Magnuson, A. H. Arrowood, C. A. Carriker, L. Petri, L. Temoshenko, and S. McClernan                                                                                               | Management of path routing in packet communications networks                                                                                                    |
| 5,987,523 | A. Wesley, D. B. Lindquist, J. R. Hind, P. Nanavati, and Y. S. Tan                                                                                                                   | Applet redirection for controlled access to non-originating hosts                                                                                               |

|           |                                                                                                      |                                                                                                                                               |
|-----------|------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 5,987,536 | D. D. Williams, H. J. Locker, J. W. Pearce, R. D. Johnson, and R. S. Springfield                     | Computer system having flash memory bios which can be accessed while protected mode operating system is running                               |
| 5,987,548 | R. C. Dixon                                                                                          | Method and apparatus for identification number system                                                                                         |
| 5,987,577 | C. P. Miller and M. Beiley                                                                           | Dual word enable method and apparatus for memory arrays                                                                                       |
| 5,987,587 | D. Meltzer                                                                                           | Single chip multiprocessor with shared execution units                                                                                        |
| 5,987,598 | C. P. Roth, E. H. Welbon, and F. E. Levine                                                           | Method and system for tracking instruction progress within a data processing system                                                           |
| 5,987,725 | B. A. Valdes, J. C. Major, and M. A. Church                                                          | Method for parting a slider from a slider row                                                                                                 |
| 5,987,742 | M. A. Acciai, R. N. Ives, and R. R. Hall                                                             | Technique for attaching a stiffener to a flexible substrate                                                                                   |
| 5,987,890 | G. Hougham, G. L. Chiu, and L. S. Mok                                                                | Electronic component cooling using a heat transfer buffering capability                                                                       |
| 5,989,443 | K. L. Covert, K. W. Semkow, and L. J. Smith-Jimarez                                                  | Selective etching of nickel/iron alloys                                                                                                       |
| 5,989,674 | B. R. York, E. E. Marinero, and T. M. Reith                                                          | Thin film disk with acicular magnetic grains                                                                                                  |
| 5,989,728 | J. K. Howard, K. R. Coffey, and M. A. Parker                                                         | Thin film magnetic recording medium having high coercivity                                                                                    |
| 5,989,751 | J. Cotte and M. Datta                                                                                | High energy density, flexible lithium primary batteries                                                                                       |
| 5,990,249 | B. K. Furman and M. Angelopoulos                                                                     | Methods of fabrication of deaggregated electrically conductive polymers and precursors thereof                                                |
| 5,990,418 | J. Coffin, K. Bivona, L. S. Goldmann, M. J. Interrante, R. A. Sherif, S. Iruvanti, and S. S. Drofitz | Hermetic CBGA/CCGA structure with thermal paste cooling                                                                                       |
| 5,990,509 | H. I. Hanafi, J. J. Welser, and S. M. Burns                                                          | 2F-square memory cell for gigabit memory applications                                                                                         |
| 5,990,511 | J. M. Leas                                                                                           | Memory cell with transfer device node in selective polysilicon                                                                                |
| 5,990,562 | D. P. Vallett                                                                                        | Semiconductor devices having backside probing capability                                                                                      |
| 5,990,887 | G. A. Cuomo and R. J. Redpath                                                                        | Method and system for efficient network desirable chat feedback over a communication network                                                  |
| 5,990,888 | H. G. Kiel, J. A. Blades, and R. Romon                                                               | Method and system for manipulating graphical objects                                                                                          |
| 5,990,889 | H. Y. Amro                                                                                           | Method, memory and apparatus for automatically resizing a window in response to a loss or gain in focus                                       |
| 5,991,115 | A. P. Praino, B. C. Webb, E. J. Yarmchuk, M. Schultz, and T. J. Chainer                              | Method and apparatus for determining separation between read and write elements of a transducer                                               |
| 5,991,150 | F. E. Doany, G. L. Chiu, J. P. Karidis, R. N. Singh, and T. M. Cipolla                               | Self deploying magnifier for a portable computer display screen                                                                               |
| 5,991,208 | A. G. Aipperspach, P. J. Paulson, and P. T. Freiburger                                               | Write multiplexer apparatus and method for multiple write port programmable memory                                                            |
| 5,991,224 | A. G. Aipperspach, P. J. Paulson, and P. T. Freiburger                                               | Global wire management apparatus and method for a multiple-port random access memory                                                          |
| 5,991,385 | A. G. Ganek, B. E. Willner, E. H. Stern, and J. M. Dunn                                              | Enhanced audio teleconferencing with sound field effect                                                                                       |
| 5,991,401 | D. Neal, S. L. Daniels, T. D. Escamilla, and Y. H. Ng                                                | Method and system for checking security of data received by a computer system within a network environment                                    |
| 5,991,414 | C. Jutla, J. A. Garay, R. Gennaro, and T. D. Rabin                                                   | Method and apparatus for the secure distributed storage and retrieval of information                                                          |
| 5,991,521 | C. H. Smith, C. I. Gabele, and S. T. Quay                                                            | Method and system of checking for open circuit connections within an integrated-circuit design represented by a hierarchical data structure   |
| 5,991,536 | S. Brodsky and T. J. Grose                                                                           | Notification manager for object-oriented systems                                                                                              |
| 5,991,708 | C. P. Roth, E. H. Welbon, and F. E. Levine                                                           | Performance monitor and method for performance monitoring within a data processing system                                                     |
| 5,991,710 | K. Papineni, R. T. Ward, and S. Roukos                                                               | Statistical translation system with features based on phrases or groups of words                                                              |
| 5,991,713 | G. B. Fuller and J. Unger                                                                            | Efficient method for compressing, storing, searching, and transmitting natural language text                                                  |
| 5,991,757 | J. C. Endicott, J. H. Peterson, P. J. Heyrman, R. G. Mustain, R. K. Kirkman, and S. A. Dahl          | Method and system for searching an array for an array value                                                                                   |
| 5,991,764 | N. Sundaresan                                                                                        | A method of, system for, and article of manufacture for providing a data structure supporting a generic reduction object for data parallelism |
| 5,991,775 | B. C. Beardsley, J. H. Cord, L. C. Blount, M. H. Hartung, and V. J. Legvold                          | Dynamic record caching allocation                                                                                                             |



|           |                                                                                                    |                                                                                                                                              |
|-----------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 5,991,792 | P. Nageswaran                                                                                      | Method, apparatus and computer program product for dynamically managing a thread pool of reusable threads in a computer system               |
| 5,991,821 | L. Brenner, O. T. Kirby, and P. R. Badovinatz                                                      | Method for serializing actions of independent process groups                                                                                 |
| 5,992,957 | F. Edlinger, P. W. Kelly, and R. M. Ecker                                                          | Abrasion control on sliding assemblies                                                                                                       |
| 5,993,059 | J. Singh and J. A. O'Neill                                                                         | Combined emissivity and radiance measurement for determination of temperature of radiant object                                              |
| 5,993,088 | L. M. Tartak, M. Vanderwiele, and P. Nogay                                                         | A method for improving print performance and quality by accumulating, storing and using resource accounting information with a print job     |
| 5,993,095 | R. H. Harris                                                                                       | Mechanical transmission                                                                                                                      |
| 5,993,566 | T. Lin                                                                                             | Fabrication process of NI-MN spin valve sensor                                                                                               |
| 5,993,579 | D. S. Farquhar, J. R. Wilcox, L. J. Smith-Jimarez, N. B. Feilchenfeld, and W. L. Brodsky           | High performance electrical cable and method of manufacture                                                                                  |
| 5,993,615 | C. Abry, J. N. Seward, and W. J. Murphy                                                            | Method and apparatus for detecting arcs                                                                                                      |
| 5,993,945 | D. H. Glatzel and D. J. Russell                                                                    | Process for high resolution photoimageable dielectric                                                                                        |
| 5,994,162 | B. U. Klepser, J. Burghartz, and M. B. Ritter                                                      | Integrated circuit-compatible photo detector device and fabrication process                                                                  |
| 5,994,198 | J. A. Mandelman, L. L. Hsu, and W. R. Tonti                                                        | Fabrication method for fully landing subminimum features on minimum width lines                                                              |
| 5,994,202 | G. B. Bronner, J. A. Mandelman, J. P. Gambino, and L. A. Nesbit                                    | Threshold voltage tailoring of the corner of a MOSFET device                                                                                 |
| 5,994,215 | J. P. Gambino, R. Stengl, and S. V. Nguyen                                                         | Method for suppressing pattern distortion associated with BPSG reflow                                                                        |
| 5,994,241 | M. Ronay                                                                                           | Method of forming conductive lines on a semiconductor wafer                                                                                  |
| 5,994,597 | A. C. Bhatt and J. J. Wagner                                                                       | Process for recovering high boiling solvents from a photolithographic waste stream comprising less than 10 percent by weight monomeric units |
| 5,994,910 | A. P. Ingraham, F. J. Downes, Jr., and J. A. Molla                                                 | Apparatus, and corresponding method, for stress testing wire bond-type semiconductor chips                                                   |
| 5,994,924 | D. L. Ostapko and J. F. Lee                                                                        | Clock distribution network with dual wire routing                                                                                            |
| 5,994,937 | K. N. Quader, T. Hara, and Y. Watanabe                                                             | Temperature and power supply adjusted address transition detector                                                                            |
| 5,995,019 | H. Heinrich, L. R. Zai, P. J. Sousa, T. Cofino, and T. C. Chieu                                    | Method for communicating with RF transponders                                                                                                |
| 5,995,114 | D. Tunkelang and M. N. Wegman                                                                      | Applying numerical approximation to general graph drawing                                                                                    |
| 5,995,317 | H. H. Ottesen                                                                                      | Method and apparatus for real-time filtering of a position error signal for a disk drive servo system                                        |
| 5,995,425 | A. T. Williams, R. V. Joshi, W. Hwang, and W. H. Henkels                                           | Design of provably correct arrays                                                                                                            |
| 5,995,440 | S. C. Lewis and T. M. Maffitt                                                                      | Off-chip driver and receiver circuits for multiple voltage level DRAMs                                                                       |
| 5,995,570 | G. A. Marin and R. O. Onvural                                                                      | Recovering a clock signal in a multimedia network using time stamps                                                                          |
| 5,995,590 | A. P. Ittycheriah, B. Ramabhadran, C. Narayanaswami, M. A. Picheny, and P. T. Brunet               | Method and apparatus for a communication device for use by a hearing impaired/mute or deaf person or in silent environments                  |
| 5,995,598 | V. Berstis                                                                                         | Phone line LAN                                                                                                                               |
| 5,995,640 | R. M. Bolle, S. Pankanti, and Y. Yao                                                               | System and method for determining if a fingerprint image contains an image portion representing a dry fingerprint impression                 |
| 5,995,743 | J. A. Kahle and S. Mallick                                                                         | Method and system for interrupt handling during emulation in a data processing system                                                        |
| 5,995,752 | C. A. Manoni, M. Cooper, S. Vemuri, and T. Chao                                                    | Use of language instructions and functions across multiple processing sub-environments                                                       |
| 5,995,931 | B. L. Lewis, C. Waast, E. Epstein, J. M. Le Roux, L. R. Bahl, P. V. de Souza, and S. V. De Gennaro | Method for modeling and recognizing speech including word liaisons                                                                           |
| 5,995,933 | A. A. Nassiff, F. Fado, P. J. Guasti, and R. VanBuskirk                                            | Configuring an audio interface contingent on sound card compatibility                                                                        |
| 5,995,957 | A. Shibamiya, B. Iyer, H. S. Tie, M. Wang, and T. A. Beavin                                        | Improved query optimization through the use of multi-column statistics to avoid the problems of column correlation                           |
| 5,995,960 | M. S. Spencer and T. A. Lochner                                                                    | Method and system for improving efficiency of programs utilizing databases                                                                   |
| 5,995,975 | J. W. Malcolm                                                                                      | Dictionary process for object containment                                                                                                    |
| 5,995,977 | M. Presler-Marshall                                                                                | Module configuration systems, methods and computer products for data processing systems                                                      |
| 5,996,013 | A. A. Slane, G. S. Delp, P. L. Leichty, R. Rajan, R. A. Guerin, and V. Peris                       | Method and apparatus for resource allocation with guarantees                                                                                 |

|           |                                                                                                                 |                                                                                                        |
|-----------|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 5,996,016 | D. Fuqua, D. R. Thalheimer, and H. Lee                                                                          | Dynamic IP address association                                                                         |
| 5,996,025 | D. Shi, D. E. Wood, L. W. Russell, M. N. Day, P. P. Dixon, R. L. Verburg, T. Pham, and Y. T. Yeung              | Network transparent access framework for multimedia serving                                            |
| 5,996,035 | J. M. Allen and P. K. Egan                                                                                      | Hot-plug voltage and power management control using detected connection status                         |
| 5,996,040 | F. Malgioglio and P. J. Meaney                                                                                  | Scalable, modular selector system                                                                      |
| 5,996,049 | J. D. Lewis, J. M. Kaiser, J. S. Dodson, and R. K. Arimilli                                                     | Cache-coherency protocol with recently read state for data and instructions                            |
| 5,996,074 | D. Rhoades, J. Turek, and K. Houck                                                                              | In-box configuration apparatus for a computer system                                                   |
| 5,996,085 | H. Cheong and H. Q. Le                                                                                          | Concurrent execution of machine context synchronization operations and non-interruptible instructions  |
| 5,996,087 | L. Brenner, O. T. Kirby, and P. R. Badovinatz                                                                   | Program product for serializing actions of independent process groups                                  |
| 5,996,092 | J. N. Dieffenderfer, J. T. Bridges, T. A. Sartorius, T. K. Collopy, and V. R. Augsburg                          | System and method for tracing program execution within a processor before and after a triggering event |
| 5,996,096 | M. W. Kellogg and T. Dell                                                                                       | Dynamic redundancy for random access memory assemblies                                                 |
| 5,996,097 | D. A. Evans and L. Ternullo                                                                                     | Testing logic associated with numerous memory cells in the word or bit dimension in parallel           |
| 5,996,601 | D. J. Martin and F. W. Kern, Jr.                                                                                | Polymer protected component                                                                            |
| 5,996,985 | B. Peterson, D. C. Long, D. R. Wall, J. G. Balz, and M. LaPlante                                                | Component retainer                                                                                     |
| 5,997,392 | E. G. Walton, M. K. Miller, and Y. Chamberlin                                                                   | Slurry injection technique for chemical-mechanical polishing                                           |
| 5,997,638 | F. Le Goues, M. H. von Hoegen, M. W. Copel, and R. Tromp                                                        | Localized lattice-mismatch-accommodation dislocation network epitaxy                                   |
| 5,997,773 | A. Viehbeck, J. M. Rubino, J. M. Shaw, M. Angelopoulos, R. Saraf, S. Purushothaman, T. Graham, and V. A. Brusie | Composition containing a polymer and conductive filler and use thereof                                 |
| 5,997,798 | A. Tremblay and R. Tetreault                                                                                    | Biasing mold for integrated circuit chip assembly encapsulation                                        |
| 5,997,997 | A. P. Angelopoulos, G. W. Jones, L. J. Matienzo, T. R. Miller, and V. R. Markovich                              | Method for reducing seed deposition in electroless plating                                             |
| 5,998,248 | H. C. Wann and W. H. Ma                                                                                         | Fabrication of semiconductor device having shallow junctions                                           |
| 5,998,250 | D. E. Kotecki, K. Saenger, and P. C. Andricacos                                                                 | Compound electrode stack capacitor                                                                     |
| 5,998,273 | H. C. Wann and W. H. Ma                                                                                         | Fabrication of semiconductor device having shallow junctions                                           |
| 5,998,292 | C. Black, J. Burghartz, J. J. Welser, and S. Tiwari                                                             | Method for making three dimensional circuit integration                                                |
| 5,998,569 | D. P. Hogan and H. G. Linde                                                                                     | Environmentally stable optical filter materials                                                        |
| 5,998,835 | D. V. Horak, J. A. Mandelman, M. C. Hakey, S. J. Holmes, T. Furukawa, and W. H. Ma                              | High performance MOSFET device with raised source and drain                                            |
| 5,998,847 | C. L. Bertin, F. Assaderaghi, J. A. Mandelman, J. P. Gambino, and L. L. Hsu                                     | Low voltage active body semiconductor device                                                           |
| 5,998,848 | J. S. Brown, R. J. Gauthier, and S. H. Voldman                                                                  | Depleted poly-silicon edged MOSFET structure and method                                                |
| 5,998,852 | J. Faul, R. L. Mohler, W. E. Haensch, and W. S. Berry                                                           | Geometrical control of device corner threshold                                                         |
| 5,998,868 | B. Davari, H. B. Pogge, H. L. Kalter, and J. Greschner                                                          | Very dense chip package                                                                                |
| 5,998,876 | C. J. Hawker, J. L. Hedrick, K. R. Carter, M. Gaynes, R. D. Miller, and S. L. Buchwalter                        | Reworkable thermoplastic hyper-branched encapsulant                                                    |
| 5,998,981 | A. B. Wilson, R. J. Houghton, and R. M. Parent                                                                  | Weak inversion NMOS regulator with boosted gate                                                        |
| 5,999,013 | J. R. Elliott                                                                                                   | Method and apparatus for testing variable voltage and variable impedance drivers                       |
| 5,999,037 | D. C. Edelstein, K. Bernstein, W. A. Klaasen, and W. D. Pricer                                                  | Circuit for operating a control transistor from a fusible link                                         |
| 5,999,110 | B. Kabelac, G. A. Jaquette, M. Blaum, and S. R. Hetzler                                                         | Defect tolerant binary synchronization mark                                                            |
| 5,999,177 | A. E. Martinez                                                                                                  | A method and system for controlling content on a display screen in a computer system                   |
| 5,999,234 | D. J. Pearson, G. L. Chiu, and R. A. Budd                                                                       | A transmissive cell for ultra small pixel applications                                                 |



|           |                                                                                                |                                                                                                                                                        |
|-----------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5,999,356 | J. E. Kulakowski, K. Dimitri, and R. J. Means                                                  | Data cartridge library with rotating storage stacks                                                                                                    |
| 5,999,379 | D. Mauri, N. L. Robertson, and R. Hsiao                                                        | Spin valve read head with plasma produced metal oxide insulation layer between lead and shield layers and method of making                             |
| 5,999,549 | D. W. Siljenberg, L. W. Freitag, and R. J. Thatcher                                            | Method and apparatus for laser safety                                                                                                                  |
| 5,999,612 | A. G. Ganek, B. E. Willner, E. H. Stern, and J. M. Dunn                                        | Integrated telephony and data services over cable networks                                                                                             |
| 5,999,714 | A. R. Conn, C. Visweswariah, and R. A. Haring                                                  | Method for incorporating noise considerations in automatic circuit optimization                                                                        |
| 5,999,721 | D. Colglazier                                                                                  | Method and system for the determination of performance characteristics of a cache design by simulating cache operations utilizing a cache output trace |
| 5,999,935 | C. E. Clark, D. R. Sutherland, J. D. Haggar, and S. J. Greenspan                               | Tail compression of a sparse log stream of a multisystem environment                                                                                   |
| 5,999,945 | D. Neuhard, D. R. Palmer, and L. C. Lahey                                                      | Method for organizing files associated with a job ticket used in a network printing system                                                             |
| 5,999,974 | B. H. Ratcliff and S. R. Valley                                                                | Internet protocol assists for high performance LAN connections                                                                                         |
| 5,999,976 | A. Zlotek, B. Shmueli, F. Schmuck, J. Wyllie, and W. A. Kish                                   | Parallel file system and method with byte range API locking                                                                                            |
| 5,999,982 | D. Patterson and G. T. Kishi                                                                   | Automated message processing system                                                                                                                    |
| 5,999,992 | G. F. Grohoski, O. Mitchell, P. J. Jordan, T. M. Nguyen, W. R. Hardell, and Y. Rim             | A system and method for adapting data ports in transferring data between computing elements                                                            |
| 6,000,014 | J. D. Lewis, J. S. Dodson, L. Clark, and R. K. Arimilli                                        | Software-managed programmable congruence class caching mechanism                                                                                       |
| 6,000,033 | E. E. Kelley, J. U. Knickerbocker, and N. J. Dauerer                                           | Password control via the web                                                                                                                           |
| 6,000,036 | C. M. Durham, P. J. Klim, and W. B. Van Der Hoeven                                             | Logical steering to avoid hot spots on integrated circuits                                                                                             |
| 6,000,129 | A. C. Bhatt, A. F. Moring, D. H. Glatzel, D. J. Russell, K. I. Papathomas, and V. R. Markovich | Process for manufacturing a circuit board with filled holes                                                                                            |
| 6,000,130 | C. S. Chang and F. D. Egitto                                                                   | Planar redistribution structure and printed wiring device                                                                                              |
| 6,000,418 | F. W. Kern, Jr. and W. A. Syverson                                                             | An integrated dynamic fluid mixing apparatus and method                                                                                                |
| 6,000,623 | C. W. Mann, D. G. Lund, K. G. Blatti, M. G. Clark, S. P. Mroz, S. S. Kang, and T. D. Green     | System packaging for high performance computer applications                                                                                            |
| 6,000,768 | E. N. Dials, L. Hodges, and S. Luglan                                                          | Minimal fastener electronic console                                                                                                                    |
| 6,001,235 | A. Chiu, D. M. Arken, J. J. Fatula, R. W. Hitzfeld, W. C. Hsiao, and Y. Hsiao                  | Rotary plater with radially distributed plating solution                                                                                               |
| 6,001,268 | A. C. Ting, C. Hwang, D. Perez, G. Dworschak, M. Straub, and S. V. Nguyen                      | Reactive ion etching of alumina/TIC substrates                                                                                                         |
| 6,001,662 | A. Correale, J. N. Dieffenderfer, K. Patel, R. W. Kohake, and T. Garner                        | Method and system for providing a reusable configuration self-test controller for manufactured integrated circuits                                     |
| 6,001,702 | C. Gruszecki, F. Scholl, M. A. Passaro, R. K. Cook, and S. E. Luce                             | Metal to metal capacitor and method for producing same                                                                                                 |
| 6,002,031 | D. Neumayer and P. R. Duncombe                                                                 | Novel metal alkoxyalkoxidicarboxylates and use to form films                                                                                           |
| 6,002,136 | M. Naeem                                                                                       | Microscope specimen holder and grid arrangement for in-situ and ex-situ repeated analysis                                                              |
| 6,002,164 | H. W. Conru and S. Starr                                                                       | Semiconductor lead frame                                                                                                                               |
| 6,002,172 | A. K. Sarkhel and K. V. Desai                                                                  | Substrate structure and method for improving attachment reliability of semiconductor chips and modules                                                 |
| 6,002,177 | A. J. Emerick, C. G. Woychik, J. M. Zalesinski, M. A. Gaynes, and V. Puligandla                | High density integrated circuit packaging with chip stacking and via interconnections                                                                  |
| 6,002,267 | A. K. Malhotra, J. Pennacchia, R. Shields, and T. A. Wassick                                   | Improvement of in-line voltage plane test for multi-chip modules                                                                                       |
| 6,002,271 | M. Lee, S. G. Chu, and V. R. Kodali                                                            | Dynamic MOS logic circuit without charge sharing noise                                                                                                 |
| 6,002,275 | K. Hosokawa and T. Kiriata                                                                     | Single ended read write drive for memory                                                                                                               |
| 6,002,285 | J. S. Muhich and Q. Nguyen                                                                     | Circuitry and method for latching information                                                                                                          |
| 6,002,292 | D. H. Allen and D. L. Stasiak                                                                  | Method and apparatus to control noise in a dynamic circuit                                                                                             |
| 6,002,352 | H. S. El-Ghoroury, J. Gu, M. Millward, and S. D. Hall                                          | Method of sampling, downconverting, and digitizing a bandpass signal using a digital predictive coder                                                  |
| 6,002,397 | W. Jaaskelainen, Jr.                                                                           | Window hatches in graphical user interface                                                                                                             |
| 6,002,400 | A. J. Happ, D. J. Krajnovich, and K. Loring                                                    | Method and apparatus for handles to components in graphical user interface                                                                             |

|           |                                                                                                       |                                                                                                                                                               |
|-----------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6,002,539 | G. J. Smith and H. H. Ottesen                                                                         | Method and apparatus for positioning a dual element magnetoresistive head                                                                                     |
| 6,002,540 | E. A. Cunningham, H. H. Ottesen, and K. J. Erickson                                                   | Method and apparatus for rotary actuator arc compensation correction in a direct access storage device                                                        |
| 6,002,541 | J. Hong, K. A. Belser, and S. Yamamoto                                                                | Method and apparatus for providing a linear position error sensing (PES) signal                                                                               |
| 6,002,575 | D. E. Kotecki and W. H. Ma                                                                            | Adherent separator for self-defining discontinuous film                                                                                                       |
| 6,002,754 | P. Jaiswal, S. Gandhi, and V. Michelini                                                               | Billing formatter for telephone systems utilizing intelligent peripherals in advanced intelligent network                                                     |
| 6,002,809 | E. Feig, E. Linzer, and I. R. Finlay                                                                  | Digital image processor for image scaling                                                                                                                     |
| 6,002,874 | B. A. Feigenbaum and P. C. Bahrs                                                                      | Method and system for translating goto-oriented procedural languages into goto-free object oriented languages                                                 |
| 6,002,951 | D. Goland, L. Studzinski, R. A. Shelleman, R. V. Vallabhaneni, and S. L. Shinde                       | Multi-layer ceramic substrate having high $T_c$ superconductor circuitry                                                                                      |
| 6,002,970 | A. L. Bond, F. K. Yu, G. Abdelnour, K. H. Potter, Jr., and R. W. Downes                               | Method and apparatus for interface dual modular redundancy                                                                                                    |
| 6,002,998 | M. J. Martino and R. C. Paulsen                                                                       | Fast, efficient hardware mechanism for natural language determination                                                                                         |
| 6,003,022 | H. H. Hall, R. Eberhard, and S. Lakshmi                                                               | Database execution cost and system performance estimator                                                                                                      |
| 6,003,023 | W. J. Schmidt                                                                                         | Incremental change processing apparatus for presented objects                                                                                                 |
| 6,003,029 | D. Gunopulos, J. Gehrke, P. Raghavan, and R. Agrawal                                                  | Automatic subspace clustering of high dimensional data for data mining applications                                                                           |
| 6,003,042 | G. T. Melahn                                                                                          | Systems, methods and computer programs products for storing a new version of an Envy Library file in a teamconnection object oriented programming environment |
| 6,003,048 | D. C. Fallside                                                                                        | System and method for converting a coordinate based document to a markup language (ML) based document                                                         |
| 6,003,059 | R. A. Bechade                                                                                         | Carry select adder using two level selectors                                                                                                                  |
| 6,003,066 | C. H. Brobst, C.-H. Chou, and J. M. Ryan                                                              | System for distributing a plurality of threads associated with a process initiating by one data processing station among data processing stations             |
| 6,003,075 | C. Y. Chao, F. D. Lawlor, J. Ramanathan, J. W. Arendt, M. D. Kistler, R. Strong, and R. A. Mancisidor | Dynamic changes in configuration                                                                                                                              |
| 6,003,080 | B. H. Ratcliff and S. R. Valley                                                                       | Internet protocol assists using multi-path channel protocol                                                                                                   |
| 6,003,082 | D. C. Wolfe, J. Gampper, and T. Makansi                                                               | Selective internet request caching and execution system                                                                                                       |
| 6,003,083 | D. N. Dillenberger, G. Normington, and K. E. Davies                                                   | Workload management amongst server objects in a client-server network with distributed objects                                                                |
| 6,003,087 | B. C. Housel and D. B. Lindquist                                                                      | CGI response differencing communication system                                                                                                                |
| 6,003,088 | A. Stagg, A. R. Sager, B. H. Ratcliff, D. W. Schmidt, J. Houston, and S. R. Valley                    | Blocking IP datagrams in a multi-path channel point-to-point environment                                                                                      |
| 6,003,091 | C. B. Stunkel, D. L. Garmire, F. A. Kampf, J. R. Herring, K. J. Reilly, N. Rash, and R. F. Bartfai    | Verifying a time-of-day counter                                                                                                                               |
| 6,003,094 | A. R. Dean                                                                                            | Generic Java gateway for connecting a client to a transaction processing system                                                                               |
| 6,003,095 | C. J. Rousse and R. P. Pekowski                                                                       | Apparatus and method for demand loading a dynamic link library                                                                                                |
| 6,003,101 | B. A. Williams                                                                                        | Efficient priority queue                                                                                                                                      |
| 6,003,106 | G. L. Guthrie and J. S. Fields, Jr.                                                                   | High performance multichannel DMA controller in a PCI host bridge with a built-in cache                                                                       |
| 6,003,126 | D. Huynh and W. L. Leung                                                                              | Special instruction register including allocation field utilized for temporary designation of physical registers as general registers                         |
| 6,003,418 | D. C. Long, K. C. O'Neil, L. Economikos, M. LaPlante, and R. J. Bezama                                | Punched slug removal system                                                                                                                                   |
| 6,003,757 | D. Danovitch, G. Beaumont, G. Brouillette, and P. A. Gruber                                           | Apparatus for transferring solder bumps and method of using                                                                                                   |
| 6,003,863 | A. Decker and W. A. Barringer                                                                         | Apparatus and method for conveying a flexible sheet through manufacturing processes                                                                           |
| 6,004,139 | J. N. Ohler, K. Dramstad, and S. Grundon                                                              | Memory module interface card adapter                                                                                                                          |
| 6,004,472 | L. K. Dorius and S. A. Bolasna                                                                        | Dual etch step process for making a three etch depth air bearing slider                                                                                       |
| 6,004,473 | C. Hwang, D. J. Seagle, and R. Hsiao                                                                  | Magnetic write head having a coil with submicron pitch                                                                                                        |